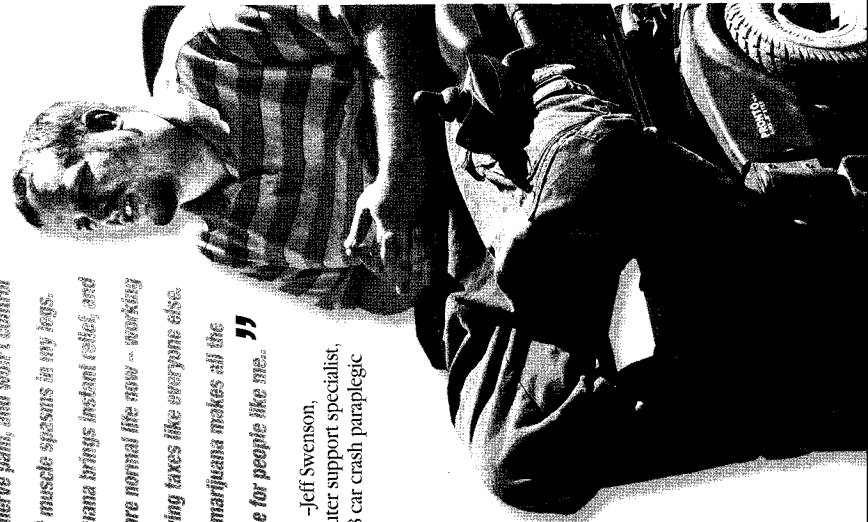


**Medical marijuana, proven by modern research, benefits a wide range of conditions:**

- Cancer
- Glaucoma
- HIV (AIDS)
- Wasting Syndrome (Cachexia)
- Chronic Pain
- Severe Pain
- Migraines
- Nausea
- Seizures
- Epilepsy
- Muscle Spasms
- Multiple Sclerosis
- Crohn's Disease
- Inflammation
- Arthritis
- Rheumatism
- Fibromyalgia
- Osteoporosis
- Diabetes
- Alzheimer's Disease
- Lou Gehrig's Disease
- Tourette's Syndrome
- Hepatitis C
- Hypertension
- Depression & Bipolar Disorder
- Sleep Apnea
- .....and more

**“ Even tons of Oxycontin can't cut my never-ending nerve pain, and won't control the constant muscle spasms in my legs. Medical marijuana brings instant relief, and I can live a more normal life now - working full-time, paying taxes like everyone else. Medical marijuana makes all the difference for people like me. ”**

-Jeff Swenson,  
computer support specialist,  
1998 car crash paraplegic



**Montana's Medical Marijuana Act**, passed by 62% of voters in 2004, allows physicians to make medical marijuana recommendations to patients diagnosed with certain conditions and symptoms. The law (M.C.A. 50-46) also protects physicians and indemnifies them from liability.

**patients & families united** is a network of Montana patients and their loved ones working together to improve each other's lives and to publicize the facts about medical marijuana. We conduct public education programs targeting everyone, especially healthcare providers, law enforcement agencies and public officials. Most people don't know that the peer-reviewed published literature about medical marijuana, including double-blind studies, is voluminous. The pace of new global research increases every year, as do the breadth and significance of the research findings.

This brochure highlights just a few illustrative examples of marijuana's benefits to patients suffering from conditions both severe and common. The studies cited or mentioned - some focused on the full marijuana flower, others focused on specific constituents unique to marijuana - demonstrate how marijuana is proven to be safe and effective medicine. This research mirrors the experiences of the thousands of patients in the growing number of states that allow the use of medical marijuana.

Learn more at our website - [www.mtnpatients.org](http://www.mtnpatients.org) - which features timely news as well as links to some of the world's leading web-based resources and published research about medical marijuana.

# The Medical Uses of Marijuana

**EXHIBIT** Z  
**DATE** 3/17/09  
**NO.** 5520

**“ ... safer than most medicines prescribed every day. If marijuana were a new discovery rather than a well-known substance carrying cultural and political baggage, it would be hailed as a wonder drug. ”**

-Lester Grinspoon, Harvard Medical School,  
emeritus professor of psychiatry, coauthor of  
*Marijuana, the Forbidden Medicine*

**patients & families united**

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**patients & families united**

Serving the Interests of  
Montana Medical Marijuana Patients,  
Safely & Legally

# modern research confirms thousands of years of anecdotal and historical evidence— medical marijuana produces dramatic beneficial effects.

## Safer than Most Medicines Prescribed Every Day

Modern research documents that marijuana compares favorably to other medicines. It is not physically addictive. It presents fewer side effects – of dramatically lesser consequence and risk – than opioids and numerous other commonly prescribed pharmaceuticals. Many patients report dramatic reductions in their need for other riskier and more expensive prescribed drugs when using medical marijuana. After literally thousands of years of continuous use by peoples of all cultures and eras, there exists not a single recorded incident of death or overdose caused by marijuana.

## Marijuana Helps Cancer Patients

Numerous double-blind studies document marijuana's remarkable value in addressing the symptoms of cancer and the side-effects of cancer-treatment, like pain, nausea and low-appetite. Many people are unaware that other research has documented instances of medical marijuana actually *striking* cancerous tumors. Lifelong cigarette smokers who also smoke marijuana have even been found to have a *lower* risk of lung cancer than smokers who don't also use marijuana. And chronic marijuana smokers get cancer no more often than people who have never smoked marijuana or cigarettes.

### “Cannabinoids – the active components of Cannabis sativa and their derivatives – exert

*palliative effects in cancer patients by*

*preventing nausea, vomiting and pain and by*

*stimulating appetite. In addition, these*

*compounds have been shown to inhibit the growth of tumor cells... Cannabinoids are usually well*

*tolerated, and do not produce the generalized toxic effects of conventional chemotherapies.”*

—Guzman, 2003. Cannabinoids: potential anticancer agents.

*Nature Reviews: Cancer*, Volume 3, October 2003.

## Marijuana Relieves Pain

Name the cause and type of pain, and chances are that recent double-blind research and/or decades of anecdotal information

from patients shows that medical marijuana provides effective relief. This includes chronic pain resulting from severe injuries and conditions such as fibromyalgia, Multiple Sclerosis, cancer and neuropathy related to diabetes, HIV and other conditions. Where pain is connected to inflammation, research has found that medical marijuana delivers site-specific anti-inflammatory relief. Most patients report that marijuana doesn't reduce their ability to function normally the way opiates do, and that they can reduce dramatically or even eliminate their need for opiates and similar risky pain-relievers when using marijuana.

## Marijuana Reduces Suffering from Rheumatoid Arthritis

Double-blind research documents that medical marijuana significantly improves pain on movement, pain at rest, quality of sleep, inflammation, and intensity of pain. Other research has found that marijuana effectively blocks the progression of arthritis.

### “...effectively blocked [the] progression of arthritis.”

—Mallat et al. 2000. The nonpsychoactivecannabis constituents cannabidiol is an oral anti-arthritis therapeutic in murine. *Journal of the Proceedings of the National Academy of Sciences* 97: 9561-9566.

## Marijuana Slows & Alleviates Multiple Sclerosis

Clinical studies show that marijuana may inhibit the progression of MS. Numerous studies document medical marijuana's power in addressing the disease's many unrelenting symptoms – including pain, muscle spasms, depression, fatigue, and incontinence.

“The results of this study are important because they suggest that in addition to symptom management, ...cannabis may also slow the neurodegenerative

processes that ultimately lead to chronic disability in

Multiple Sclerosis and probably other diseases.”

—Pryce et al. 2003. Cannabinoids inhibit neurodegeneration in models of Multiple Sclerosis. *Brain* 126: 2191-2202.

## Smoking Not Required

Research documents that vaporizers eliminate completely the negative effects of smoking. Patients also can administer medical marijuana by eating it cooked in many ways – in butter cakes, cookies, sauces, etc. Patients report medicinal benefits from drinking medical marijuana in teas and from administering via compress or tincture. **Smoking isn't the only way** to receive this medicine – but smoking or vaporizing are the easiest ways for patients to feel beneficial effects almost immediately, and

to realize their greatest ability to make delicate adjustments in dosage.

## Marijuana in Pills and Other Forms

**Marinol** – consists solely of THC (tetrahydrocannabinol), one of more than 66 known medicinally-active compounds in marijuana. It is approved by U.S. Food & Drug Administration (FDA) only for nausea-reduction and appetite-

stimulation, and research suggests that it does little – and may be counterproductive – when used for pain relief. Most patients report effects decidedly inferior to those of medical marijuana or of products derived from the full marijuana flower. And Marinol costs considerably more: a typical one-month prescription costs up to \$1,200, while equivalent marijuana ranges from virtually free when grown by oneself, up to approximately \$500 on the open market.

**Sativex** – a liquid distilled from the full marijuana flower, species- and content-controlled, administered in controlled dosages via spray. Currently approved for physician prescription in Canada; approval pending in Europe; just beginning clinical trials in the U.S. under FDA protocols in 2007. Cost expected to be significantly higher than marijuana plants.

**Varieties & Strains** – just as there are different kinds of apples and tomatoes, so too for the marijuana plant, and different strains in the genus *cannabis* offer different medicinal advantages. Patients typically research and share information to learn which strains will best meet their needs.

